Crudia abbreviata A.R.Bean (Caesalpiniaceae), a new species from Cape York Peninsula, Queensland

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Summary

Bean, A.R. (2010). *Crudia abbreviata* A.R.Bean (Caesalpiniaceae), a new species from Cape York Peninsula, Queensland. ***Austrobaileya* 8(2): 151–154.** The new species *Crudia abbreviata* A.R.Bean is described and illustrated. It is endemic to Cape York Peninsula, Queensland and considered to be closely related to *C. blancoi* Rolfe. A key to the Australian species of *Crudia* is provided.

Key Words: Caesalpiniaceae, *Crudia*, *Crudia abbreviata*, *Crudia blancoi*, Australia flora, Queensland flora, taxonomy, new species, identification key

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Introduction

Crudia Schreb. is a genus of 50–55 species distributed in south-east Asia, Cape York Peninsula in northern Australia, central Africa, tropical South America, Central America and the Caribbean (Mackinder 2005). It reaches its greatest diversity in Malesia where there are 30 species (Hou 1996). Only one species (*C. papuana* Kosterm.) has previously been recorded for Australia (Ross 1998), where it is apparently confined to the Jardine River in the far northern part of Cape York Peninsula in Queensland.

The species described here was first collected in 1974 by Geoff Tracey, but without flowers or fruits, and it was tentatively identified as a *Pterocarpus* species. Only relatively recently has flowering and fruiting material of the species become available, showing it to be a new species of the genus *Crudia*.

Materials and methods

This paper is based on herbarium material present at BRI. Measurements of floral parts are based on material reconstituted in boiling water, while all other measurements are based on dried herbarium material. Length and width dimensions are indicated as length × width followed by the measurement unit. National Park is abbreviated N.P.

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Taxonomy

Crudia abbreviata A.R.Bean **species nova** *C. blancoi* affinis, sed inflorescentiis 3–5.5 cm longis (13–17(–27) cm longis in *C. blancoi*), pedicellis e basi articulatis (in illa ad apicem articulatis) et stipite ovarii *c.* 1.2 mm longo (*c.* 0.5 mm longo in *C. blancoi*) differens. **Typus:** Queensland. Cook District: Cultivated at Yuruga Nursery, Walkamin, ex Stone Crossing, [*c.* 45 km NE of Weipa,] 23 September 1998, *G. Sankowsky 1631* (holo: BRI; iso: CNS).

Crudia sp. (Archer River BH 3078RFK); Hyland *et al.* (2003).

Pterocarpus sp. (Archer River B.P.Hyland 3078); Holland & Pedley (2007: 80).

Trees to 27 m high. Bark flaky. Stipules subulate, linear to narrowly-deltate, 2–3 mm long, deciduous. Leaves (3–)4–7-foliolate, petiole and rachis together 4–7.5 cm long, sparsely hairy; rachis tip extending up to 5 mm beyond terminal leaflet, but rarely seen (caducous). Leaflets alternate, thin, chartaceous or membranous, ovate, 28–98 × 12–41 mm, all about the same size or the basal ones smaller; apex acute to acuminate; base obtuse to broadly cuneate, more or less symmetric; green and glabrous above, creamy or rusty below with moderately dense cover of simple appressed to patent hairs; petiolules 2–4 mm long. Inflorescence racemose, axes 3–5.5 cm long, densely puberulous, bearing

70–100 flowers. Bracts narrowly-deltate, 0.9–1.3 mm long, with dense, rusty antrorse hairs; bracteoles 2, opposite to sub-opposite, ovate to deltate, 0.4–1 mm long, with dense, rusty antrorse hairs, attached to the proximal one-third of the pedicel, persistent at least to anthesis. Pedicels 5.5–7 mm long at anthesis, articulated at the base, glabrous or with sparse antrorse to patent hairs. Hypanthium hemispherical to bowl-shaped, 1.5–2 mm long, glabrous. Calyx lobes 4, elliptical, cymbiform, glabrous, 2.5–3.5 × 1.8–2.8 mm, pale green, recurved after anthesis, apex obtuse. Petals absent. Stamens (8–)10; filaments 5.5–6.5 mm long, white, glabrous; anthers versatile, 0.8–0.9 mm long, yellow. Ovary stipe *c.* 1.2 mm long, glabrous except distally; ovary 1.5–2 mm long, densely hairy, ovules 2; style 1.2–2 mm long, curved, glabrous; stigma small, obscure. Immature pods shortly stipitate, obliquely oblong, 3.7–4 × 3–3.3 cm, somewhat woody, transversely wrinkled, flat, not beaked, densely rusty-hairy. Seeds not seen. **Fig. 1.**

***Additional specimens examined*: Queensland.** Cook District: Stone Crossing, Wenlock River, Oct 1980, *Hyland 10781* (BRI, CNS); Wenlock River, Moreton Telegraph Office, Jul 1988, *Dalliston CC221* (BRI); Archer Bend N.P., 120 km WNW of Coen, Jun 1994, *Fell DGF4360 & Buck* (BRI; NSW, to be distributed); Archer River, Sep 1974, *Hyland 3078* (BRI, CNS); Archer Bend N.P., Horsetrader Lagoon, *c.* 46 km SW of Merluna Homestead, Dec 1990, *Fell 2269 & Jensen* (BRI); Archer Bend, Archer River, Sep 1974, *Tracey s.n.* (BRI); 13 km N of junction of Archer and Coen Rivers, Archer Bend N.P., Jun 1993, *Neldner 4071* (BRI, CNS, DNA); Piccaninny Creek on Piccaninny Plains (Station) Wildlife Sanctuary, Oct 2008, *Jensen 1680 & Nicholson* (BRI; CANB, CNS, DNA, MEL, to be distributed).

***Distribution and habitat*:** Endemic to Queensland. Known only from the Wenlock River and Archer River and some tributaries, in the central-northern part of Cape York Peninsula between latitudes 12°20′S and 13°30′S (**Map 1**). It inhabits well-developed semi-deciduous notophyll rainforest along riverbanks and flood-channels. Other tree species found in association include *Buchanania arborescens*, *Mallotus philippensis*, *Lagerstroemia archeriana*, *Syzygium bamagense*, *Elaeocarpus arnhemicus*, *Terminalia sericocarpa*, *Ficus drupacea*, *Diospyros calycantha*, *Canarium australianum* and *Bombax ceiba*. Altitude ranges from 10–90 metres.

***Phenology*:** Poorly known. In habitat flower buds have been collected in June, and immature fruits in October. Trees flowered in September in cultivation at Tolga, which is considerably south of the known distribution.

***Affinities*:** *Crudia abbreviata* is perhaps most closely related to the Malesian species *C. blancoi* Rolfe, based on descriptions given by Hou (1996). *Crudia abbreviata* differs from *C. blancoi* by the inflorescences 3–5.5 cm long (13–17(–27) cm long for *C. blancoi*), pedicels articulated at the base (articulated at the apex in *C. blancoi*) and the ovary stipe *c.* 1.2 mm long (*c.* 0.5 mm long for *C. blancoi*).

***Notes*:** Verdcourt (1979) presented a description for a "Crudia sp. near blancoi Rolfe", which he indicated occurred in the Western Province of Papua in "riverine savannah" at 30 m altitude. He did not cite any specimens, but from the description given, this taxon could be conspecific with *C. abbreviata*.

Key to the Australian species of *Crudia*

Leaflets 2, coriaceous, glabrous on lower surface; pedicels 0.5–3 mm long; inflorescence axes glabrous or sparsely hairy . . . . . **C. papuana**

Leaflets 3–7, chartaceous or membranous, a moderately dense tomentum present on lower surface; pedicels 5.5–7 mm long; inflorescence axes densely puberulous . . . . . **C. abbreviata**

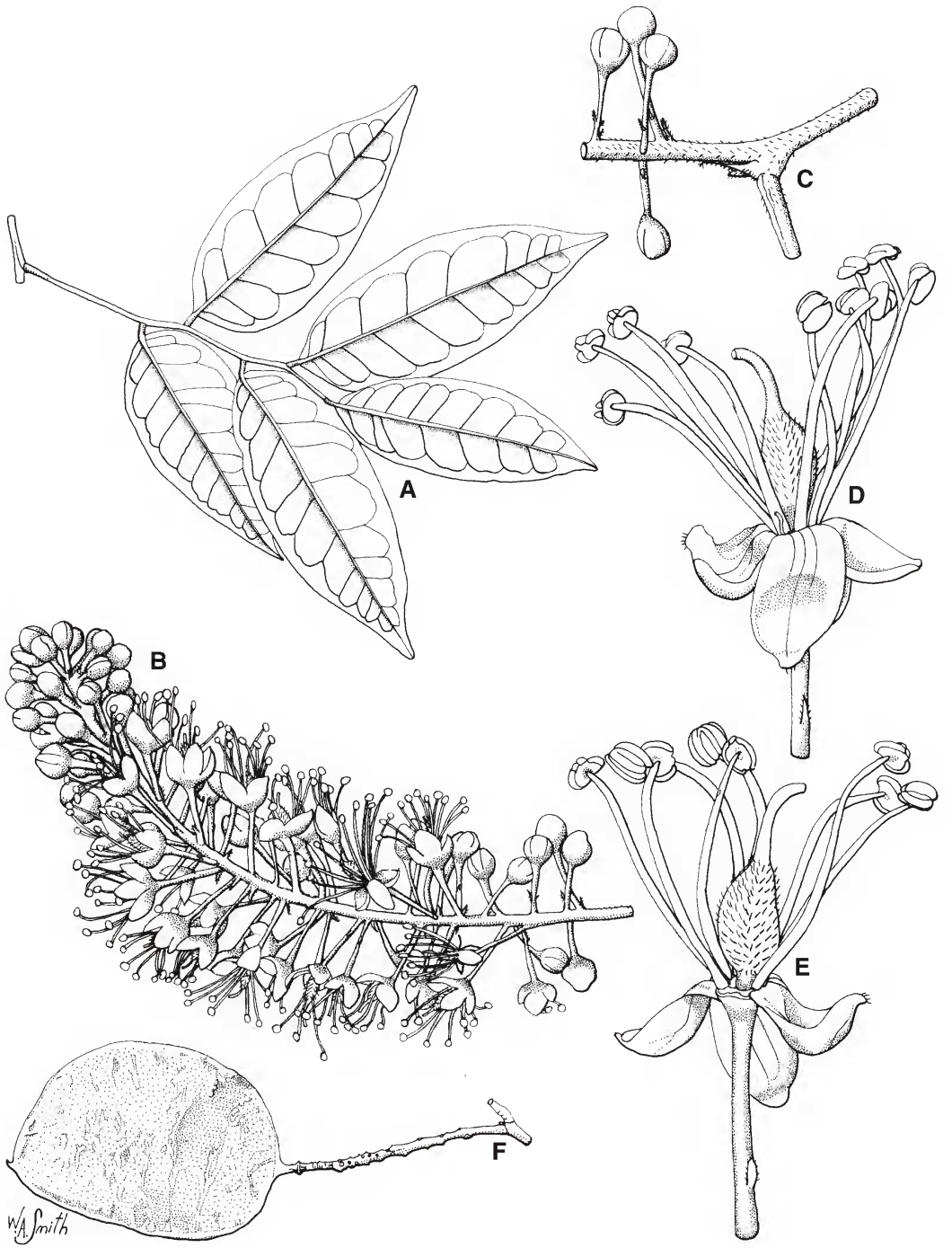

Fig. 1. ***Crudia abbreviata.*** A. leaf × 1. B. Inflorescence × 2. C. portion of rachis and flowers buds, showing bracteoles and bracts × 3. D. intact flower and pedicel × 6. E. flower with one sepal removed × 6. F. immature fruit and rachis × 1. A,F from *Jensen 1680 & Nicholson* (BRI); B–E from *Sankowsky 1631* (BRI). Del. W.Smith.

D.Fell (*in litt.*) stated that this species also occurs along Cox Creek, a tributary of the Wenlock River, in association with *Syzygium bamagense*, *Calophyllum sil*, *Buchanania arborescens*, *Melaleuca leucadendra*, *Beilschmiedia obtusifolia*, *Vitex glabrata*, *Syzygium forte* subsp. *forte* and *Mallotus polyadenos*. I am unaware of any herbarium specimens of this species from Cox Creek.

Conservation status: *Crudia abbreviata* is known from at least five populations, and some of these have subpopulations that may behave as components of genetic metapopulations. At the known sites, the species is locally common, but the number of mature individuals is unknown. The area of occurrence of known populations is *c.* 7000 km². There are considerable areas of riverine gallery forest that have never been botanically explored in the area of occurrence and the species is likely to be much more widespread than currently known. However, the area of occupancy is unlikely to exceed 40 km². The species has been recorded from the Conservation Reserve Estate in Mungkan Kandju National Park (formerly Archer Bend N.P.) and on the Australian Wildlife Conservancy property 'Piccaninny Plains'. The suggested conservation status is **Near Threatened** based on the criterion D of IUCN (2001).

Etymology: From the Latin *abbreviatus*, meaning shortened. This is a reference to the length of the inflorescences, which are shorter in this species than in almost all other species of the genus.

Acknowledgements

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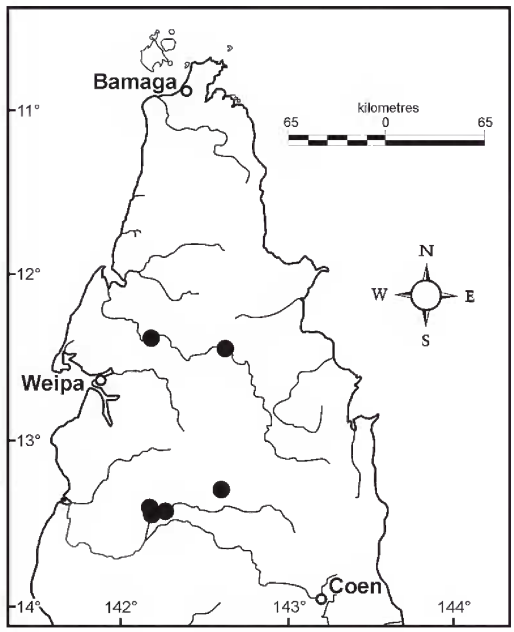

Map 1. Distribution of *Crudia abbreviata*.